OIPE

RAW SEQUENCE LISTING DATE: 12/13/2001 PATENT APPLICATION: US/09/992,009 TIME: 14:06:51

Input Set : A:\52661 seq listing.txt
Output Set: N:\CRF3\12132001\I992009.raw

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3 <110> APPLICANT: Slater, Steven C
      5 <120> TITLE OF INVENTION: Telomeres of Agrobacterium Linear Chromosome
      7 <130> FILE REFERENCE: 38-10(52661)B
C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/992,009
C--> 9 <141> CURRENT FILING DATE: 2001-11-26
      9 <160> NUMBER OF SEQ ID NOS: 4
     11 <170> SOFTWARE: PatentIn version 3.1
     13 <210> SEO ID NO: 1
     14 <211> LENGTH: 20000
     15 <212> TYPE: DNA
     16 <213> ORGANISM: Agrobacterium tumefaciens
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     23 tttttcaggt atccagatca acaaggcact gtcgtcaatc gatgcccatc aggaaaccag
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     25 eggaagtgge aggatteaga egetgegggt tgtegeeege cagaaaggeg eegetgteeg
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     27 gategatget gtetteaata tteaggeagg acagategee gacaaagaeg teateegeaa
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     29 gggcatctgc gacatcataa aaggegegta aggcatgget taaagacact ceggtecage
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     31 agcacgagec gtcgtgcaca ggaagccaat ctgtttcgcg caggatgtta cgaaatcgat
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     33 gattgaaget tategetgae egtateegeg ggtagtetee agtgttagat atgegeegag
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    41 ctattttcga agggtggaac accgatcccg aggtgacgaa gtacctgacg tggaaacccc
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    45 gtacategtt tecagetgte atetgecate gegaaeggee acatgaacta ateggeegta
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    47 tigatgeacq tecqatqqqe cacaaqqtet ettacqqqtq qettqteeqa aqaacetqqt
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    49 ggggccgggg tgttgcaagc gaggtcgttc aactcgctgt agaacacgcg ttatcgcatc
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    51 egegeatett tegeacegaa geateetgeg aegttetgaa eaeggegtea geaagagtga
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    53 tggaaaaagt agggatgaca aaggaggccg tgcttcgacg gtaccttttt caccccaatt
    55 tttcgaatat geegegagae geetteetgt attecaaggt aegttaacte agtgaaatea
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    57 eggggegtee aactteetea taateeeget atteeaagae eggaaaagta caegteatee
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    59 aaaaaaqcaa tatgtgtcta tcgaacgcag ggaattaccg gattttccag aaagcgacgt
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    61 cggaaagtte etgeaacaae cacaceegat ecaaateetg aaateaatet tgetageaaa
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    67 gegaegetee ceactaggea tgatacaaac tgacegagaa ttategttgg tttttgeagtg
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    71 gcggctccaa taaaacgtgt tccgcaggga tatttgggtt tcgaatagcg aaaatatgtg
                                                                            1620
    73 accaagatac cetectetga agtggtgcet ttgaaatcag ggcgaccate tcaaaatteg
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    75 tacaacetca acttgagttg aggtcgaggg gggcggcgtc acaaggatta accgttgtgt
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    77 ggatagegge acaaccgggt gtaactgtet cegetttaca tittetgact geetaggegg
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    79 getggecaat aggaaaaate gaageeatet ggeggeaete aacegeggeg acacagtege
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    81 geteaggeag getagaggtg gttgtetaae gtteaacetg egteagaeag etaeetggea
                                                                            1920
    83 taactagatt gagccaacag ccgagattge gtcagacgac ttctctcaat ggggttggtc
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    85 ataccgattg aaacgactgg aacccaaaaa tcagtgccat caaactaggc gcgttcgacg
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    87 ttgacggaac acatccaggt gattgtcgag gatggagcgc accgatccat aggttcgcgc
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| 89 | gccgatttcc | aatgcccggc | cacaggeege | attgaccett | tecegeteaa | aagetttgae | 2160 |
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| | | | | | gacgcctcgc | | 2280 |
| | | | | | atgigeteeg | | 2340 |
| | | | | | cgttcgccct | | 2400 |
| | | | | | cgggcaaacc | | 2460 |
| | | | | | catgacagga | | 2520 |
| | | | | | gcgggatagt | | 2580 |
| | | | | | cgtttgtcgt | | 2640 |
| | | | | | tagaagacgc | | 2700 |
| | | | | | tegacttteg | | 2760 |
| | | | | | . tgťgtegecá | | 2820 |
| | | | | | acggcaacct | | 2880 |
| | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | , , , , | ~ ~ | , , , | gcaagcagat | | 2940 |
| | | | | | gaaaggeteg | | 3000 |
| | | | | | aatctgtcga | | 3060 |
| | | | | | geegeatgat | | 3120 |
| | | - | | _ | cagtaacggg | | 3180 |
| | | | | | tgcagcgtca | | 3240 |
| | | | _ | _ | atgcgccgat | | 3300 |
| | | | | | tegetgacat | | 3360 |
| | | | | | teaegeaceg | | 3420 |
| | | | | | tetteaaate | | 3480 |
| | | | | | attgcgttcc | | 3540 |
| | | | | | cgacaaacac | | 3600 |
| | | | | | gaattggggg | | 3660 |
| | | | | | ctcctgacga | | 3720 |
| | | | | | teteaagete | | 3780 |
| | | | | | aagatgccaa | | 3840 |
| | | | | | gaaatagcgg | | 3900 |
| | | | | | caatgacacc | | 3960 |
| | | | | | gagatggctt | | 4020 |
| | | | | | agtccaagca | | 4080 |
| | | | | | tgtctttgcc | | 4140 |
| | | | | | togacoggtt | | 4200 |
| | | | | | cttcgtttct | | 4260 |
| 161 | aaaccgcgcg | aaccagcaaa | ctcgccaaag | ggtcagcccc | caccagatgg | ttcaagcgat | 4320 |
| | | | | | aactgcagca | | 4380 |
| 165 | cttttattcc | cgtgtaagcc | tgttgaagca | gctccagaat | gaattcgaga | tgcgaatggt | 4440 |
| | | | | | atacaggtga | | 4500 |
| 169 | cggagatcag | tccactcata | ctgcaggact | ctccctaaaa | aactccggtc | gtgtccagat | 4560 |
| | | | | | tatcgagatt | | 4620 |
| | | | | | tcagtcgcac | | 4680 |
| | | | | | accgtctgat | | 4740 |
| 177 | agtgttccag | cacgcaacaa | tacgaagcgc | ctgccacggg | gatgattgtc | gatcaggtat | 4800 |
| 179 | gtaatcgaca | cggacggtgc | atttgaaacg | ttgagcaaac | cttgtgagtt | cggtttccag | 4860 |
| 181 | cgttcggcaa | taggttttga | tctggtggat | caacggctcg | ctctgtgcca | attcccgatt | 4920 |
| 183 | tgaagcgtaa | gggagattaa | accgcagtgt | atcgtcgata | acagtcaggt | cccgttcgcc | 4980 |
| 185 | gagaccgtag | agtttcgcta | cccaagcatc | gacatctggc | caaacgtcgc | cgccctcttt | 5040 |



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| 187 | ttccaaccgc | gcaaaaagat | tggttacctc | cogcacecga | tectgegega | gtgactcgaa | 5100 |
|-----|------------|------------|------------|------------|------------|------------|-------|
| 189 | gggcggaatc | gccacctcct | caaggataga | tttctcaacc | acctcacgct | caaagccgaa | 5160 |
| 191 | ttcgccgctg | gttatcagcg | atatccagag | cgcaacgcga | ctaccaagca | caagtgcaag | 5220 |
| 193 | atagcgcgtc | aataacgacg | cctcggcggc | teeettggaa | ctaaagccat | accaactctc | 5280 |
| 195 | attgaatacg | atgtcttgat | cgcagactga | catctgtatc | cgctgtagct | tggcaggcgg | 5.340 |
| 197 | ggatttatga | acgagcaaga | tcggcccgtt | atagatagct | ctatctcttg | cgcgatgaac | 5400 |
| 199 | gcgatcagtg | tcgaaaactg | gaagctgtga | aggatcgata | actaacgttg | cggacgacac | 5460 |
| 201 | gtcatcaaga | tgaggaagtc | catgcaggtg | agtggcgtcg | tegeegatag | tgccatcatc | 5520 |
| 203 | atgcttcttg | ctactatctc | tgagcttctg | atagccattt | ccattcgcga | gacctccatc | 5.580 |
| 205 | geccaacteg | cgccaatagc | gtcccagcgt | cgtgaaattg | cctcgacgaa | ccctgtcaat | 5640 |
| 207 | tagcgaaaga | teageeteae | tgccgcgaaa | taggattttt | agggtctccg | ggcgttcccg | 5700 |
| 209 | caaatcctgc | ggacggacca | catacgcgtt | cgtcgcatcg | accegeatta | cgccggcatt | 5760 |
| 211 | attgaaaccc | ttttcatagc | ggggcgtgag | catccgaaat | ceggaegetg | tatgcgcagg | 5820 |
| 213 | ceggttgace | gcaaaaagga | ggcaaaacgg | cgccgaaatg | ctgggccaga | cctttgtctg | 5880 |
| 215 | gcgtagctca | gagccgttga | tgatcgaggt | tacatccatc | gcttcgagga | ggctctgccg | 5940 |
| 217 | cgccagcggc | atgccatccc | cttgctggaa | tagaaaccgc | geatgeageg | caaatatgat | 6000 |
| | | | atcgcatcgc | | | | 6060 |
| | | | ttataccgtc | | | | 6120 |
| | | | agtcttccaa | | | | 6180 |
| | | | cgtcgtgctc | | | | 6240 |
| 227 | | | caacatcggt | | | | 6300 |
| 229 | | | gcttgtccac | | | | 6360 |
| | | | cgcaaaagcg | | | | 6420 |
| | | | ctcggagcgc | | | | 6480 |
| | | | cacgaaacgc | | | | 6540 |
| | | | ccgccgaaat | | | | 6600 |
| | | | tcggatgcgg | | | | 6660 |
| | _ | | ggtaatactc | | | | 6720 |
| 243 | gtgcgagaag | tcgagattat | cccactgctc | tttccaaccc | agggacaatt | gecececete | 6780 |
| 245 | tgcgcgccgc | agaatgttgc | caatgaactg | ccccccattt | egaceggaca | gtcggcataa | 6840 |
| 247 | gcagaaaggc | tcaagcacag | gcttgaggac | aggcttatgt | ctaacgacta | tcgacacgtt | 6900 |
| 249 | gaattgctga | cgggtgatgt | tcgccgcagg | cggtggacaa | ccgagcaaaa | gctgacaatc | 6960 |
| 251 | attgagcaga | gttttgaacc | cggcgagacg | gtatcttcga | cegetegeeg | tcatggcgtg | 7020 |
| 253 | gcgcccaatt | tgctttatcg | gtggcgcagg | ctcttgagcg | agggaggtgc | tgcagccgtg | 7080 |
| 255 | gattctgacg | agccggttgt | cgggaattcg | gaagtgaaga | aactggagga | tcgcgtccgg | 7140 |
| 257 | gagttggagc | gcatgctcgg | tcgcaagacg | atggaggtcg | aaatcctccg | cgaagccctt | 7200 |
| 259 | tccaaagcgg | actcaaaaaa | acggatatcg | cggccgatct | tgttgccgaa | ggacggttcg | 7260 |
| 261 | cgatgaaggc | cgtcgcagac | acgctgggcg | tetecegite | caacctcatc | gagcggctga | 7320 |
| 263 | aaggcagatc | aaagccgcgt | gggccataca | acaaggccga | ggatgcagag | cttctgcccg | 7380 |
| 265 | ccatccgcag | gctggtggat | caaaggccaa | cctatggcta | teggeggate | geegegetee | 7440 |
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| 269 | tcatgggtaa | ccacgccatg | ctactggagc | acacageegt | tegeaaggge | cgcctccacg | 7560 |
| 271 | atggcaaggt | catggtcatg | cgctccaacc | tgcgctggtg | ctcggacggc | ctggagttcg | 7620 |
| | | | attcgtctcg | | | | 7680 |
| | | | gccaatgcag | | | | 77.10 |
| 277 | tgttggaggc | ggtcgagaaa | cgcttccatg | caacccgagc | cccgcatgct | atcgagcatc | 7800 |
| | | | tataccgcgc | | | | 7860 |
| | | | ccggtcgcca | | | | 7920 |
| 283 | tcgtcaaaac | gttgaagcgg | gactatattc | ggatatcagc | tctaccggac | gcccaaacag | 7980 |
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Input Set : A:\52661 seq listing.txt
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| 2.8 | 39 | tgaaatgggg | tgcactccag | ccaagaacat | aacatgcttc | caacgtgagc | ttcggaaacg | 8160 |
| | | | | | | atcgagccat | | 8220 |
| 29 | 93 | ggcgaactag | atctggccgg | tcaaacagtt | catgatette | gagaccagac | tcatcgacag | 8280 |
| | | | | | | gccacgatca | | 8340 |
| | | | | | | gccggagagg | | 8400 |
| 29 | 9 | cttttaaaga | cgatatggct | tggtcaagca | atttcagaat | tacgccggtg | atccaagtcc | 8460 |
| 3 (| 01 | tqtcattaat | ctccqccgcc | gggcgcagat | ttgccaagcg | tgcaaaggta | agccagctct | 8520 |
| | | | | | | cgaaaggcga | | 8580 |
| 3 (|) 5 | tccgatagac | atccaatctt | ccgggataga | ccactccgag | gtacggcgcg | tegeetegea | 8640 |
| | | | | | | tccgtttagc | | 8700 |
| | | | | | | accttcaacc | | 8760 |
| | | | | | | aagcaactct | | 8820 |
| | | | | | | atccagggca | | 8880 |
| | | | | | | acagtagcac | | 8940 |
| | | | | | | cttggcggtc | | 9000 |
| | | | | | | gttctacctt | | 9060 |
| | | | | | | acgcggcaat | | 9120 |
| | | | | | | agttagggtt | | 9180 |
| | | | | | | gatcgcggag | | 9240 |
| | | | | | | atactctcac | | 9300 |
| | | | | | | tttttggcgg | | 9360 |
| | | | | | | cctaacgccg | | 9420 |
| | | | | | | ggctcttggc | | 9480 |
| | | | | | | atctgacgcc | | 9540 |
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| | | | | | | cgttcaagca | | 9660 |
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| | | | | | | gggttgggag | | 9780 |
| | | | | | | atttgcccga | | 9840 |
| | | | | | | ctttgccgac | | 9900 |
| | | | | | | ggaacaggtg | | 9960 |
| | | | | | | acatccaacg | | 10020 |
| | | | | | | cgtatcctct | | 10080 |
| | | | | | | acttcccttg | | 10140 |
| | | | | | | ggacttaagt | | 10200 |
| | | | | | | ttgatgttac | | 10260 |
| | | | | | | acggattcga | | 10320 |
| | | | | | | gcgaagccgc | | 10380 |
| | | | | | | ggtcgtaggt | | 10440 |
| | | | | | | gctgaccggt | | 10500 |
| | | | | | | aacatcctcc | | 10560 |
| | | | | | | agtcacgaag | | 10620 |
| | | | | | | cggcagggtt | | 10680 |
| | | | | | | gatgccgacg | | 10740 |
| | | | | | | gatggcagct | | 10800 |
| | | | | | | cgccaccagc | | 10860 |
| | | | | | | ggaaggatcg | | 10920 |
| | | | | | | | | |



RAW SEQUENCE LISTING

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|-----|------------|------------|------------|------------|------------|------------|-------|
| | | | | | tgcgcaggcg | | 11040 |
| 387 | caatcagacc | ggggtcaccg | aaaccctgat | gggcctgacg | gacaagatgg | aactttatcc | 11100 |
| 389 | gcgccttgct | gaatgcatcg | aacagataga | gccgaccgcc | tggaacgttg | tgctcaaggc | 11160 |
| 391 | aggcatcaag | ttccatgtct | tegegatagg | cgttgccttg | ttctggtatg | cacaagcaca | 11220 |
| 393 | ggtgcgctgg | ttcatgcacg | accttggcat | aggcgcggca | aaagcgcttt | ccatcttcgc | 11280 |
| 395 | cqqaqcattt | ctgtttgcca | cagtcgccgc | attcgtcgtt | gcgctattga | tcactctcga | 11340 |
| 397 | cttcaaaagc | gtcgcgcccg | cagegagetg | atccgccgcg | ccgcctgcgg | cgtaaccccg | 11400 |
| 349 | agcgttttcg | tgaccgcccc | ggcatgaaca | agcggcgttg | ccatgacaag | atcaacgagc | 11460 |
| 401 | teeggeaact | togatgaaag | atatgtattc | cgcgtggcgc | ttccggcctg | tgagggatgc | 11520 |
| 403 | ggcatttaac | tgccgccaca | tcatatatcc | ctcaggcacg | ccgcatcgtc | aacgcaaacg | 11580 |
| 405 | tgcaacccgc | tttgcacctg | ttgattttag | aattagtgtt | ttatgtcggg | gatttagcct | 11640 |
| | | | | | gctattgttg | | 11700 |
| 409 | cqtaqqattt | ggttgcgggg | gcctgagtcc | acggagactt | gtaattttca | gacggatagg | 11760 |
| | | | | | gcagttggcc | | 11820 |
| | | | | | aggatgccct | | 11880 |
| | | | | | ccaggattac | | 11940 |
| 417 | qtcctcccqa | ataagtgcct | cacaatcttc | gcgaagcctg | gggtcagttc | tcagtggcaa | 12000 |
| | | | | | ccgtgtcgtc | | 12060 |
| | | | | | aattgctatc | | 12120 |
| 423 | | | | | cggctggtca | | 12180 |
| 425 | cggctgtcga | gegetggget | tttcgtctaa | cgtcctcatc | catcctacct | cgccggccgt | 12240 |
| 427 | caaatcattt | cactgttggg | gacggttggt | acgtacttga | cggtgacaaa | cacgccgcag | 12300 |
| 429 | cqtcqqtttc | gagcaatatc | ttcaatgcgt | ggctgccacc | gcgccgactt | tactgaccca | 12360 |
| | | | | | ccaagggttc | | 12420 |
| | | | | | acatgccgaa | | 12480 |
| | | | | | ggaaacctgc | | 12540 |
| | | | | | gcctaagctg | | 12600 |
| | | | | | gaaacgtaga | | 12660 |
| | | | | | gaaagtgctt | | 12720 |
| | | | | | gcacgatctg | | 12780 |
| | | | | | gcttcgccag | | 12840 |
| 447 | gcgtcgatat | ctcgaggcgt | gtccagcagc | gcaaggagac | gcgaagcggc | atcaatgata | 12900 |
| | | | | | tgattggcgc | | 12960 |
| 451 | gaaggatagc | gaattgccag | atccgccaac | tccacggtgt | caaggtcgag | ttgcatcgaa | 13020 |
| 453 | agataaggtt | tgtctttcga | tgcttcgatt | accgatccca | tgaccggaag | atcaacggag | 13080 |
| | | | | | gcccgagaac | | 13140 |
| | | | | | caggcatcgg | | 13200 |
| 459 | toggaacago | gaatgagctt | caaccccggc | agctgcgttt | caaacgtacc | gtcgtgaggt | 13260 |
| | | | | | tcataatgct | | 13320 |
| 463 | gccttcttac | caacggaaag | tctgagcaag | cgatatttgg | acgatcaagc | aagcatatcg | 13380 |
| 465 | gacattaaag | gagtcagtgg | tctcccaccc | agaaatcttc | catttcccga | tagaagcacc | 13440 |
| | | | | | aaagttgcag | | 13500 |
| | | | | | cattcccggc | | 13560 |
| | | | | | gggggcacgg | | 13620 |
| | | | | | atgcagccga | | 13680 |
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VERIFICATION SUMMARY

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 $L:9\ M:270\ C:$ Current Application Number differs, Replaced Current Application No

L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date